**Schinus molle var. areira l.: CONSEQUENCES OF SUBACUTE EXPOSURE TO ETHANOLIC EXTRACT FROM ITS FRUITS IN MICE**

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**INTRODUCTION**

It is known that *Schinus molle* var. *areira* (Anacardiaceae), whose vulgar names are “aguarihy” or “molle”, is a shrubby tree native of South America which exerts several biological effects such as: antibacterial, antiviral, antiseptic, diuretic, hypotensive, antitumoral, analgesic and anti-inflammatory (1). In our laboratory, abundant studies also indicated that this plant has repellent and insecticidal properties (2-3). This evidence suggests that this species could be very useful for the treatment of several pathologies and for some pest control, so we considered that it is necessary to investigate its safety. For this reason, the aim of the present work was to study the subacute oral exposure to ethanolic extract from fruits of *Schinus molle* var. *areira* in mice, by assessing its effects on the nervous system functionality and on hematological and biochemical parameters.

**MATERIALS AND METHODS**

The experiment was conducted according to the protocols described by OECD (4).

The plant extract was incorporated into the diet and fed daily to a group of 8 CF1 female mice, 8 weeks old, over a period of 28 days at a dose of 1000 mg/kg body weight/day. Control group was fed only with the standard diet. All the animals were observed for signs of toxicity. At the end of the exposure, behavioral and functional parameters of the mice were evaluated through a functional observational battery (FOB), which included a thorough description of the animals’ appearance, behavior, and functional integrity. Motor activity was assessed in an open field. Subsequently, blood samples were obtained for hematological analysis and for the determination of biochemical parameters like glucose, cholesterol, creatinine, urea and hepatic enzymes.

**RESULTS**

Evaluations of the FOB showed that female mice exposed to extract had an incremented activity in their home cages and in the experimental arena compared to control group (p<0.01 and p<0.05 respectively).

In the hematological analysis, mice exposed to the extract showed a significant decrease in the mean corpuscular volume (MCV) and the mean corpuscular hemoglobin (MCH) (p<0.05 in both cases) compared to control mice, but all the values were within the reference range for mice.

Finally, in the biochemical evaluations, the exposed group showed a significant increase in the urea and creatinine levels compared to control group (p<0.05 in both comparisons).

**CONCLUSIONS**

The subacute exposure of the ethanolic extract from fruits of *Schinus molle* var. *areira* increased the spontaneous activity of the exposed female mice in the evaluations of the FOB. This stimulant effect has already been observed after the acute and subchronic exposure of the extract in rats and mice (5).

The incremented levels of urea and creatinine in plasma observed in the exposed group could be a sign of impairment in renal function. However, this alteration could be transitory because, after the subchronic exposure of the extract, it has been seen that the levels of both parameters were normal.

These results show that the ethanolic extract from fruits of *Schinus molle* var. *areira* did not produce serious effects on the nervous system functionality and on hematological and biochemical parameters after the oral subacute exposure in female mice.

**REFERENCES**

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